

NAPHTHALENE

Also known as: White Tar, Tar Camphor, Moth Balls, Moth Flakes, Naphthalin
Chemical reference number (CAS): 91-20-3

WHAT IS NAPHTHALENE?

Naphthalene is either a white solid or a liquid with a strong odor like mothballs. It's used to make dyes, explosives, plastics, and lubricants.

Naphthalene is found naturally in crude oil. It is also found in coal tar wastes at former manufactured gas plants. Coal tars were by-products at these plants.

In homes, naphthalene may be used as a moth repellent or may be released from dyes or new plastic items.

Naphthalene evaporates quickly. Some of the naphthalene that ends up in lakes, streams or soil evaporates into the air. Naphthalene that seeps through soil into groundwater can remain unchanged for many years.

HOW ARE PEOPLE EXPOSED TO NAPHTHALENE?

Breathing: People breathe naphthalene most often when they're working with it on the job. People could also breathe the chemical as they visit a chemical cleanup site, use mothballs around their house, do laundry or bathe with contaminated water.

Drinking/Eating: People can be exposed to low levels when they use contaminated water for drinking or preparing food.

Touching: Naphthalene can be absorbed through the skin when people handle the chemical, work or play in contaminated soil, or when using contaminated water for activities such as bathing or laundry.

DO STANDARDS EXIST FOR REGULATING NAPHTHALENE?

Water: There are no state and federal drinking water standards for naphthalene. We suggest you stop drinking water that contains more than 20 parts per billion (ppb) naphthalene. If levels of naphthalene are very high (above 1,000 ppb) in your water, you may need to avoid washing, bathing, or using the water for other purposes. Contact your local public health agency for more information specific to your situation.

Air: No standards exist for the amount of naphthalene allowed in the air of homes. We use a formula to convert workplace limits to home limits. Based on the formula, we recommend levels be no higher than 0.2 parts per million (ppm) of naphthalene in air. Most people can smell naphthalene at very low levels (0.04 ppm). Smelling an odor of naphthalene does not necessarily mean a health risk is present. Often there is an odor of naphthalene well before there is a safety concern.

The Wisconsin Department of Natural Resources regulates the amount of naphthalene that can be released by industries.

WILL EXPOSURE TO NAPHTHALENE RESULT IN HARMFUL HEALTH EFFECTS?

Immediately or shortly after exposure to a level of 15 ppm of naphthalene in air, a person's eyes, nose or throat may feel irritated. Naphthalene can also irritate the skin.

Very high levels of naphthalene can cause headaches and nausea. Naphthalene may also damage the liver, kidneys and the eyes.

People can experience the following health effects after several years of exposure to naphthalene:

Cancer: Naphthalene is not suspected of causing cancer.

Reproductive Effects: The reproductive and developmental effects of naphthalene are not known.

Organ Systems: Anemia can result when high levels of naphthalene are breathed, absorbed through the skin or eaten. Repeated exposure to naphthalene can cause clouding of the eye's lens and damage vision.

In general, chemicals affect the same organ systems in all people who are exposed. However, the seriousness of the effects may vary from person to person. A person's reaction depends on several things, including individual health, heredity, previous exposure to chemicals including medicines, and personal habits such as smoking or drinking.

It is also important to consider the length of exposure to the chemical; the amount of chemical exposure; and whether the chemical was inhaled, touched, or eaten.

CAN A MEDICAL TEST DETERMINE EXPOSURE TO NAPHTHALENE?

Naphthalene is quickly eliminated from the body. Although naphthalene can be measured in exhaled breath, urine, blood, and other tissues, no reliable method exists to determine the level of your exposure. Doctors can use tests of the eyes and vision, blood, and liver and kidney function to check whether a person has any health effects from naphthalene exposure.

Seek medical advice if you have any symptoms that you think may be related to chemical exposure.

This fact sheet summarizes information about this chemical and is not a complete listing of all possible effects. It is not designed as a reference for work exposure or emergency situations.

FOR MORE INFORMATION

- Poison Control Center, 800-222-1222
- Your local public health agency
- Division of Public Health, BEOH, 1 West Wilson Street, Rm. 150, Madison, WI 53701-2659, (608) 266-1120 or Internet: <http://dhfs.wisconsin.gov/eh>



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